

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

MOBILE TELECOMMUNICATIONS)
TECHNOLOGIES, LLC,)

Plaintiff and Counter-Defendant,)

v.)

LEAP WIRELESS INTERNATIONAL, INC.)
AND CRICKET COMMUNICATIONS, INC.,)

Defendants and Counter-Plaintiffs.)
_____)

Case No. 2:13-CV-00885-JRG-RSP

JURY TRIAL DEMANDED

FIRST AMENDED ANSWER, AFFIRMATIVE DEFENSES, AND
COUNTERCLAIMS OF LEAP WIRELESS INTERNATIONAL, INC. AND
CRICKET COMMUNICATIONS, INC. TO PLAINTIFF'S FIRST AMENDED
COMPLAINT FOR PATENT INFRINGEMENT

Defendants Leap Wireless International, Inc. ("Leap") and Cricket Communications, Inc. ("Cricket"), collectively, "Defendants," by and through their undersigned attorneys, hereby amend their Answer to the First Amended Complaint for Patent Infringement and Jury Demand (the "Complaint") filed by Plaintiff Mobile Telecommunications Technologies, LLC ("MTel") as follows:

THE PARTIES

1. Defendants lack knowledge or information sufficient to form a belief as to the truth of the allegations contained in Paragraph 1 of the Complaint, and on that basis, deny the allegations of this Paragraph.

2. Defendants lack knowledge or information sufficient to form a belief as to the truth of the allegations contained in Paragraph 2 of the Complaint, and on that basis, deny the allegations of this Paragraph.

3. Defendants admit that MTel asserts against Defendants U.S. Patent No. 5,590,403 (the “403 Patent”), U.S. Patent No. 5,659,891 (the “891 Patent”), and U.S. Patent No. 5,915,210 (the “210 Patent”) (collectively, the “asserted Patents” or the “Patents-in-Suit”). Defendants deny that either of them infringe, either directly or indirectly, any valid claim of the asserted Patents.

4. Defendants admit MTel’s counsel sent a letter to Defendants dated December 31, 2012, concerning the ’403 patent, and sent a second letter to Defendants dated July 8, 2013, concerning the ’210 patent. Defendants deny the remaining allegations of Paragraph 4 of the Complaint.

5. Defendants admit the allegations of Paragraph 5 of the Complaint.

6. Defendants deny the allegations of Paragraph 6 of the Complaint.

7. Cricket admits that its 4G Long Term Evolution networks operate in the FCC licensed 1700MHz/2100MHz spectrum. Cricket denies that it operates any Long Term Evolution-Advanced network. Defendants deny the remaining allegations of Paragraph 7 of the Complaint.

8. Cricket admits the allegations of Paragraph 8 of the Complaint. Leap denies the allegations of Paragraph 8 of the Complaint.

9. Defendants deny the allegations of Paragraph 9 of the Complaint.

10. Cricket admits that it provides wireless 4G networks that use multiple input, multiple output (“MIMO”) functionality. Defendants deny the remaining allegations of Paragraph 10 of the Complaint.

11. Cricket admits that it provides transmission configurations in accordance with certain technical standards described in 3GPP LTE Release 8, 9, 10, and 11 Standards. Defendants deny the remaining allegations of Paragraph 11 of the Complaint.

12. Cricket admits that in markets where it has deployed LTE, Cricket provides wireless networks supporting the multiple input multiple output (“MIMO”) aspects of the LTE standards. Defendants deny the remaining allegations of Paragraph 12 of the Complaint.

13. Cricket admits that it has a commercial wireless network, and that it provides 4G LTE service in a limited number of markets, including Austin and Houston in Texas. Defendants deny the remaining allegations of Paragraph 13 of the Complaint.

14. Cricket admits that it charges customers a monthly fee to access Cricket’s networks. Defendants deny the remaining allegations of Paragraph 14 of the Complaint.

15. Cricket admits that it provides wireless devices and services in multiple locations throughout the United States, including in the State of Texas. Defendants deny the remaining allegations of Paragraph 15 of the Complaint.

JURISDICTION AND VENUE

16. Defendants admit that MTel alleges in Paragraph 16 of the Complaint that this is an action for patent infringement under the patent laws of the United States of America, 35 U.S.C. § 1, *et seq.* Because MTel alleges that this is an action under the patent laws of the United States, 35 U.S.C. § 1, *et seq.*, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338(a).

17. Defendants admit that this court has personal jurisdiction over the Defendants. Defendants deny the remaining allegations of Paragraph 17, including the untrue assertion that Defendants have made, used, sold, offered for sale, or imported infringing products or processes in Texas or elsewhere.

18. Defendants admit that venue is proper in the Eastern District of Texas under 28 U.S.C. § 1391(b), (c), and (d) and 28 U.S.C. § 1400(b).

FIRST CLAIM FOR RELIEF

(Infringement of United States Patent No. 5,590,403)

19. Defendants incorporate by reference Paragraphs 1-18 of this Answer as if fully set forth herein.

20. Defendants admit that U.S. Patent 5,590,403 is entitled “Method and System for Efficiently Providing Two Way Communication between a Central Network and a Mobile Unit” and that it purports to be issued by the United States Patent and Trademark Office on December 31, 1996. Defendants admit that MTel purports to attach a copy of the ’403 Patent as Exhibit A. Defendants deny that any claim of the ’403 Patent is valid and enforceable or that any claim enjoys a statutory presumption of validity. Defendants lack knowledge or information sufficient to form a belief as to the truth of the remaining allegations contained in Paragraph 20 of the Complaint, and on that basis, deny those allegations.

21. Defendants deny the allegations of Paragraph 21 of the Complaint.

22. Defendants deny the allegations of Paragraph 22 of the Complaint.

23. Defendants deny the allegations of Paragraph 23 of the Complaint.

24. Defendants deny the allegations of Paragraph 24 of the Complaint.

25. Defendants deny the allegations of Paragraph 25 of the Complaint.

26. Defendants deny the allegations of Paragraph 26 of the Complaint.

Willful Infringement of the '403 Patent

27. Defendants admit that MTel's counsel sent Defendants a letter dated December 31, 2012 by certified mail. Defendants further admit that MTel purports to have attached a copy of that letter as Exhibit D to the Complaint. Defendants deny the remaining allegations of Paragraph 27 of the Complaint.

SECOND CLAIM FOR RELIEF

(Infringement of United States Patent No. 5,659,891)

28. Defendants incorporate by reference Paragraphs 1-27 of this Answer as if fully set forth herein.

29. Defendants admit that U.S. Patent 5,659,891 is entitled "Multicarrier Techniques in Bandlimited Channels" and that it purports to be issued by the United States Patent and Trademark Office on August 19, 1997. Defendants admit that MTel purports to attach a copy of the '891 Patent as Exhibit B. Defendants deny that any claim of the '891 Patent is valid and enforceable or that any claim enjoys a statutory presumption of validity. Defendants lack knowledge or information sufficient to form a belief as to the truth of the remaining allegations contained in Paragraph 29 of the Complaint, and on that basis, deny those allegations.

30. Defendants deny the allegations of Paragraph 30 of the Complaint.

31. Cricket admits that it charges its customers a monthly fee for access to Cricket's networks. Defendants deny the remaining allegations of Paragraph 31 of the Complaint.

32. Defendants deny the allegations of Paragraph 32 of the Complaint.

33. Defendants deny the allegations of Paragraph 33 of the Complaint.

34. Defendants deny the allegations of Paragraph 34 of the Complaint.

Willful Infringement of the '891 Patent

35. Defendants admit that MTel filed an initial Complaint on October 30, 2013.

Defendants deny the remaining allegations of Paragraph 35 of the Complaint.

36. Defendants deny the allegations of Paragraph 36 of the Complaint.

THIRD CLAIM FOR RELIEF

(Infringement of United States Patent No. 5,915,210)

37. Defendants incorporate by reference Paragraphs 1-36 of this Answer as if fully set forth herein.

38. Defendants admit that U.S. Patent 5,915,210 is entitled "Method and System for Providing Multicarrier Simulcast Transmission" and that it purports to be issued by the United States Patent and Trademark Office on June 22, 1999. Defendants admit that MTel purports to attach a copy of the '210 Patent as Exhibit C. Defendants deny that any claim of the '210 Patent is valid and enforceable or that any claim enjoys a statutory presumption of validity. Defendants lack knowledge or information sufficient to form a belief as to the truth of the remaining allegations contained in Paragraph 38 of the Complaint, and on that basis, deny those allegations.

39. Defendants deny the allegations of Paragraph 39 of the Complaint.

40. Defendants deny the allegations of Paragraph 40 of the Complaint.

41. Defendants deny the allegations of Paragraph 41 of the Complaint.

MTEL'S PRAYER FOR RELIEF

Defendants incorporate by reference all preceding Paragraphs of this Answer as if fully set forth herein. The allegations in the paragraph requesting relief are in the nature of a prayer. Although no answer is required, Defendants deny that MTel is entitled to any relief whatsoever, either as prayed for in its Prayer for Relief or otherwise, and further responds as follows:

A. MTel is not entitled to a judgment that Defendants have directly infringed one or more claims of one or more of the asserted Patents under 35 U.S.C. § 271(a) because Defendants have not infringed one or more valid and enforceable claims of any of the asserted Patents;

B. MTel is not entitled to a judgment that Defendants induced infringement of one or more claims of either the asserted '891 Patent or the asserted '403 Patent under 35 U.S.C. § 271(b) because Defendants have not induced infringement of one or more valid and enforceable claims of neither the asserted '891 Patent nor the asserted '403 Patent;

C. MTel is not entitled to a judgment that Defendants contributed to the infringement of one or more claims of either the asserted '891 Patent or the asserted '403 Patent under 35 U.S.C. § 271(c) because Defendants have not contributed to the infringement of one or more valid and enforceable claims of neither the asserted '891 Patent nor the asserted '403 Patent;

D. MTel is not entitled to a judgment or order for Defendants to provide MTel with an accounting of gains, profits, savings, and advantages derived by Defendants' direct or indirect infringement of the asserted Patents, and MTel is not entitled to damages in accordance with 35 U.S.C. § 284, because Defendants have not directly or indirectly infringed any of the asserted Patents and thus MTel is not entitled to any damages whatsoever;

E. MTel is not entitled to a judgment or order for an increased damages award with respect to the asserted '403 Patent or the asserted '891 patent of up to three times in accordance with 35 U.S.C. § 284 for damages since the date the Defendants received notice of the respective Patent because, among other things, Defendants have not infringed one or more valid and enforceable claims of neither the asserted '403 Patent nor the asserted '891 Patent;

F. MTel is not entitled to a judgment or order that this case is exceptional, and MTel is not entitled to reasonable attorneys' fees or any other costs and expenses in accordance with

35 U.S.C. § 285 or Rule 54(d) of the Federal Rules of Civil Procedure, because Defendants have not infringed one or more valid and enforceable claims of any of the asserted Patents;

G. MTel is not entitled to a judgment or order preliminarily or permanently restraining or enjoining Defendants from infringing the asserted '891 Patent because Defendants have not infringed one or more valid and enforceable claims of the asserted '891 Patent; and

H. MTel is not entitled to any other relief that the Court may deem just or proper because no relief of any kind is just or proper for MTel in this case.

DEMAND FOR JURY TRIAL

Defendants join in MTel's demand for a jury trial on all issues triable to a jury.

AFFIRMATIVE DEFENSES

To the extent not expressly admitted above, the factual allegations contained in the Complaint are denied. Subject to the responses above, and without conceding that any of the following defenses must necessarily be plead or that any such defenses are not already at issue by virtue of the foregoing denials, Defendants assert the following defenses. Defendants undertake the burden of proof only as to those defenses deemed affirmative defenses by law, regardless of how such defenses are denominated herein. In addition to the affirmative and other defenses described below, Defendants reserve the right to amend this Answer and Defenses as additional information is obtained.

FIRST DEFENSE

(Non-Infringement)

1. Defendants do not infringe, and have not infringed, do not contribute to the infringement of, and have not contributed to the infringement of, do not induce others to infringe, and have not induced others to infringe, any valid and enforceable claim of any of the asserted Patents, either directly, indirectly, literally, or under the doctrine of equivalents, or otherwise.

SECOND DEFENSE

(Invalidity)

2. All claims of the asserted Patents are invalid for failure to satisfy the conditions of patentability set forth in United States Code, Title 35, including without limitation, 35 U.S.C. §§ 101, 102, 103, 112, 116, and/or 251, and the rules, regulations, and laws pertaining thereto.

THIRD DEFENSE

(Inequitable Conduct for Failure to Disclose Known Prior Art While Procuring the '891 Patent with Intent to Deceive)

3. Each and every claim of the '891 Patent is unenforceable because one or more of the named inventors and/or their patent counsel failed to disclose prior art highly material to patentability of that patent with intent to deceive the USPTO, as more fully set forth below in paragraphs 28 to 125 of Cricket's counterclaim for a declaration of unenforceability of the '891 Patent, all of which allegations are incorporated herein by reference.

FOURTH DEFENSE

(Inequitable Conduct for Failure to Join One or More Inventors as Co- Inventors of the '891 Patent)

4. Each and every claim of the '891 Patent is unenforceable because one or more of the named inventors and/or their patent counsel failed to join Dr. Rade Petrovic as a co-inventor with intent to deceive the USPTO, as more fully set forth below in paragraphs 107 to 126 of Cricket's counterclaim for a declaration of unenforceability of the '891 Patent, all of which allegations are incorporated herein by reference.

FIFTH DEFENSE

(Equitable Defenses)

5. MTel's claims are barred, in whole or in part, under principles of equity, including without limitation, acquiescence, laches, estoppel, waiver, misconduct, patent misuse, unfair competition, unclean hands, and/or other equitable doctrines.

SIXTH DEFENSE

(Limitations on Damages and Costs)

6. Any claim by MTel for damages or recovery of costs is limited by the Patent Act, including without limitation, 35 U.S.C. §§ 252, 286, 287, 288, and 307.

SEVENTH DEFENSE

(No Willful Infringement)

7. Defendants have not willfully infringed any of the asserted Patents.

EIGHTH DEFENSE

(Prosecution History Estoppel)

8. MTel is estopped from construing any valid claim of the asserted Patents to cover or include, either literally or by application of the doctrine of equivalents, any product made, used, imported, sold, or offered for sale by Defendants because of admissions and/or statements made to the United States Patent and Trademark Office in the specification of, and during the prosecution of, the applications leading to the issuance of the asserted Patents.

NINTH DEFENSE

(No Exceptional Case)

9. MTel cannot prove that this is an exceptional case justifying an award of attorneys' fees against Defendants pursuant to 35 U.S.C. § 285.

TENTH DEFENSE

(License and/or Exhaustion)

10. To the extent that MTel's accusations of infringement relate to products or services that were provided by or for any licensee of the asserted Patents, and/or provided to Defendants by or through a licensee of the asserted Patents or under a covenant not to sue, and/or are otherwise subject to the doctrine of patent exhaustion, MTel's claims are barred.

ELEVENTH DEFENSE

(Failure to Mark)

11. MTel's pre-lawsuit claims for damages are barred, in whole or in part, for failure to comply with the marking and notice requirements of 35 U.S.C. § 287.

TWELFTH DEFENSE

(Failure to State a Claim)

12. MTel's complaint fails to state any claims against Defendants upon which relief can be granted against the Defendants.

THIRTEENTH DEFENSE

(No Immediate or Irreparable Injury)

13. MTel is not entitled to injunctive relief at least because: (1) MTel has not suffered nor will it suffer irreparable harm because of Defendants' conduct; (2) any harm to MTel would be outweighed by the harm to Defendants; (3) MTel has an adequate remedy at law even if it were to prevail in this action; (4) the public interest would not be served by an injunction in favor of MTel; and (5) the '891 Patent is likely to expire before trial of this case.

COUNTERCLAIMS

Without admitting any of the allegations of the Complaint other than those expressly admitted herein, and without prejudice to their right to plead additional counterclaims as the facts

of the matter warrant, Leap Wireless International, Inc. and Cricket Communications, Inc. (collectively, “Counter-Plaintiffs”) hereby assert the following counterclaims against Mobile Telecommunications Technologies, LLC (“MTel” or “Counter-Defendant”):

PARTIES

1. Leap Wireless International, Inc. is a Delaware corporation having a principal place of business at 5887 Copley Drive, San Diego, CA 92111.
2. Cricket Communications, Inc. is a Delaware corporation having a principal place of business at 5887 Copley Drive, San Diego, CA 92111.
3. On information and belief, Mobile Telecommunications Technologies, LLC is a Delaware limited liability company having a principal place of business at 1720 Lakepointe Drive, Suite 100, Lewisville, TX 75057.

JURISDICTION AND VENUE

4. By filing its Complaint, MTel has consented to the personal jurisdiction of this Court.
5. These counterclaims arise under the patent laws of the United States, 35 U.S.C. § 101 *et seq.* and under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202. In view of the filing by MTel of its Complaint, and in view of Counter-Plaintiffs’ defenses to the Complaint, there exists an actual and justiciable controversy between the parties regarding the validity, enforceability, and alleged infringement of U.S. Patent Nos. 5,590,403 (“the ’403 Patent”), 5,659,891 (“the ’891 Patent”), and 5,915,210 (“the ’210 Patent”), collectively referred to as the “Patents-in-Suit.”
6. Venue over these Counterclaims is proper in this Court under 28 U.S.C. § 1391(b) and (c) because MTel filed its Complaint for Patent Infringement in this District.

FIRST COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of U.S. Patent No. 5,590,403)

7. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

8. By its Complaint, MTel asserts that Counter-Plaintiffs have infringed the '403 Patent.

9. Counter-Plaintiffs have denied MTel's claim of infringement of the '403 Patent, and contend that they do not infringe the '403 Patent or any other valid and enforceable asserted claim thereof.

10. The accused products and services do not directly or indirectly infringe because Counter-Plaintiffs do not practice every element of at least one claim of the '403 Patent.

11. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged infringement of the '403 Patent.

12. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Counter-Plaintiffs are entitled to declaratory judgment from this Court finding that the '403 Patent is not infringed, directly or indirectly, by the Counter-Plaintiffs.

SECOND COUNTERCLAIM

(Declaratory Judgment of Invalidity of U.S. Patent No. 5,590,403)

13. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

14. By its Complaint, MTel asserts that Counter-Plaintiffs have infringed the '403 Patent. Counter-Plaintiffs have denied this allegation and contend that the '403 patent is invalid under 35 U.S.C. §§ 101, 102, 103, 112, and/or 251.

15. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged validity of the '403 Patent.

16. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Counter-Plaintiffs are entitled to a declaratory judgment from this Court finding that the '403 Patent is invalid pursuant to 35 U.S.C. §§ 101, 102, 103, 112, and/or 251.

THIRD COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of U.S. Patent No. 5,659,891)

17. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

18. By its Complaint, MTel asserts that Counter-Plaintiffs have infringed the '891 Patent.

19. Counter-Plaintiffs have denied MTel's claim of infringement of the '891 Patent, and contend that they do not infringe the '891 Patent or any other valid and enforceable asserted claim thereof.

20. The accused products and services do not directly or indirectly infringe because Counter-Plaintiffs do not practice every element of at least one valid and enforceable claim of the '891 Patent.

21. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged infringement of the '891 Patent.

22. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Counter-Plaintiffs are entitled to a declaratory judgment from this Court finding that the '891 Patent is not infringed, directly or indirectly, by Counter-Plaintiffs.

FOURTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of U.S. Patent No. 5,659,891)

23. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

24. By its Complaint, MTel asserts that Counter-Plaintiffs have infringed the '891 Patent. Counter-Plaintiffs have denied this allegation and contend that the '891 patent is invalid under 35 U.S.C. §§ 101, 102, 103, 112, 116, and/or 251.

25. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged validity of the '891 Patent.

26. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Counter-Plaintiffs are entitled to a declaratory judgment from this Court finding that the '891 Patent is invalid pursuant to 35 U.S.C. §§ 101, 102, 103, 112, 116, and/or 251.

FIFTH COUNTERCLAIM

(Declaratory Judgment of Unenforceability of U.S. Patent No. 5,659,891)

Failure to Disclose Material Prior Art With Intent to Deceive

27. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

28. The '891 Patent was obtained through inequitable conduct for failure to disclose prior art with intent to deceive and therefore is unenforceable.

29. On June 7, 1995, William D. Hays, Dennis W. Cameron, and Walter Roehr (the "Applicants") filed a patent application with the United States Patent and Trademark Office ("USPTO") through their attorneys and which the USPTO assigned U.S. Patent Application No. 08/480,718 ("the '718 Application").

30. On August 19, 1997, the USPTO issued the '891 Patent as a result of the '718 Application.

31. The '891 Patent lists William D. Hays, Dennis W. Cameron, and Walter Roehr as co-inventors.

32. Upon information and belief, independent Claims 1, 3, and 5 of the '891 Patent disclose methods of multicarrier transmission in a band-limited channel and teach that the center frequencies of each carrier should be chosen such that the frequency difference between the center frequencies of the outer most carriers and the frequencies of the channel's edges are at least half the difference between the center frequencies of each carrier.

33. Upon information and belief, Mr. Roehr, at the time employed by Telecommunication Networks Consulting and Mr. Cameron, at the time employed by MTEL Technologies Corp., the predecessor in interest to Plaintiff and Counter-Defendant MTel, collaborated with Dr. Rade Petrovic of the University of Mississippi to present a paper entitled "Permutation Modulation for Advanced Radio Paging" ("Petrovic1") at IEEE Southeastcon '93 on or about April 4, 1993.

34. Upon information and belief, Mr. Roehr and Mr. Cameron, both named inventors on the '891 Patent, substantially contributed to the contents of Petrovic1, and were involved in the presentation of Petrovic1.

35. Petrovic1 disclosed the use of a multicarrier permutation modulation technique that allocated eight (8) subcarriers with a five kilohertz (5 kHz) separation between each subcarrier within a fifty kilohertz (50 kHz) channel.

36. The subcarriers referred to in Petrovic1 are the same carriers claimed to be taught by independent claims 1, 3, and 5 of the '891 Patent.

37. Petrovic1 disclosed the modulation of groups of six (6) data bits onto the eight (8) allocated subcarriers, with each combination of six (6) data bits modulated onto different combinations of four (4) subcarriers out of the eight (8) possible subcarriers.

38. Petrovic1 disclosed that a 7.5 kHz guard band should be used between the center frequencies of the outermost subcarriers and the frequencies of the edges of the channel.

39. Petrovic1 disclosed “a 35 kHz pass band in the middle of the channel and 7.5 kHz guard bands on each side for the skirts of the spectrum” and “eight subcarriers spaced 5 kHz apart, so that there is exactly 35 kHz spacing between end subcarriers.”

40. Petrovic1 was published in 1993, over a year prior to the ‘891 Patent’s earliest priority date, and therefore qualifies as prior art to the ‘891 Patent under 35 U.S.C. §§ 102(a) and (b).

41. Upon information and belief, applicants Mr. Roehr, at the time employed with Telecommunication Networks Consulting, and Mr. Cameron, at the time employed with MTEL Technologies Corp., together with Dr. Petrovic, collaborated on a paper entitled “Multicarrier Permutation Modulation for Narrowband PCS,” published in 1994 in Springer Publishing’s book “Wireless Personal Communications: Trends and Challenges” (“Petrovic2”).

42. Upon information and belief, both Mr. Roehr and Mr. Cameron, named inventors on the ‘891 Patent, substantially contributed to the contents of Petrovic2.

43. Petrovic2 disclosed the use of eight (8) subcarriers with a five kilohertz (5 kHz) separation between the center frequency of each subcarrier within a fifty kilohertz (50 kHz) channel.

44. The subcarriers referred to in Petrovic2 are the same carriers claimed to be taught by independent claims 1, 3, and 5 of the ‘891 Patent.

45. Petrovic2 disclosed the modulation of groups of six (6) data bits onto the eight (8) allocated subcarriers, with each combination of six (6) data bits modulated onto different combinations of four subcarriers out of the eight (8) possible subcarriers.

46. Petrovic2 disclosed the use of a five kilohertz (5 kHz) guard band between the center frequencies of each of the outermost subcarriers and the frequencies of the edges of the channel.

47. Petrovic2 was published in 1994, prior to the '891 Patent's earliest priority date, and therefore qualifies as prior art to the '891 Patent under 35 U.S.C. § 102(a).

48. Upon information and belief, Mr. Roehr, at the time employed by Telecommunication Networks Consulting, and Mr. Cameron, at the time employed with MTEL Technologies Corp., together with Dr. Petrovic, collaborated on a paper published in November 1994 in "IEEE Transactions on Vehicular Technology" entitled "Multicarrier Modulation for Narrowband PCS" ("Petrovic3"). Upon information and belief, IEEE received the manuscript from the authors on November 10, 1992. Upon information and belief, the authors revised the manuscript on April 22, 1993 and again on January 5, 1994.

49. Upon information and belief, Mr. Roehr and Mr. Cameron, both named inventors on the '891 Patent, were substantially involved in the preparation of the initial manuscript and the subsequent revisions that led to the publication of Petrovic3.

50. Petrovic3 disclosed a type of multicarrier modulation in which a transmitter first divides data into several interleaved bit streams and then uses each of these separate bit streams to modulate several carriers.

51. The several carriers referred to in Petrovic3 are the same carriers claimed to be taught by independent claims 1, 3, and 5 of the '891 Patent.

52. Petrovic³ disclosed that, in theory, the proposed mask in the fifty kilohertz (50 kHz) narrowband PCS channel could support up to eleven (11) carriers with a three kilohertz (3 kHz) separation between the center frequencies of each carrier.

53. Petrovic³ disclosed that the outermost two (2) of the eleven (11) potential carriers should remain unused to simplify the design of the transmitter and receiver.

54. Petrovic³ was published in 1994, prior to the '891 Patent's earliest priority date, and therefore qualifies as prior art to the '891 Patent under 35 U.S.C. § 102(a).

55. Mr. Cameron, Mr. Roehr, and Mr. Hays are named as co-inventors on U.S. Patent No. 5,590,403 ("the '403 Patent").

56. The '403 Patent was filed on November 12, 1992 and issued on December 31, 1996.

57. Upon information and belief, Mr. Cameron, Mr. Roehr, and Mr. Hays knew of the filing of the patent application that issued as the '403 Patent on or before its filing on November 12, 1992.

58. The '403 Patent disclosed an "exemplary embodiment" where "the carrier frequencies are spaced 3 kHz apart within a desired frequency band of 50 kHz" and guard bands of 11.5 kHz each.

59. The application leading to the '403 Patent was filed before the '891 Patent's earliest priority date, and thus qualifies as prior art to the '891 Patent under 35 U.S.C. § 102(e).

60. On or about June 1, 1992, Mr. Jai P. Bhagat, at the time Executive Vice President of Mobile Telecommunication Technologies Corp. and President of MTel Technologies Corp., filed a document entitled "Technical Feasibility Demonstration" with the Federal Communications Commission ("the FCC Document").

61. Exhibit A to the FCC Document was entitled “Transmitter Parameter Characterization for NWN” and listed D.W. Cameron as the “Client Contact.” Upon information and belief, the D.W. Cameron listed on Exhibit A to the FCC Document is the same David Cameron named as a co-inventor on the ‘891 Patent.

62. Exhibit A to the FCC Document disclosed “5 modulated carriers (3 kbps BPSK) can be placed in a 50 kHz bandwidth” and “approximately half of the authorized bandwidth to be occupied with modulated signal (e.g. 22.5 kHz out of 50 kHz was modelled).”

63. Figure 2 of Exhibit A to the FCC Document disclosed placing 8 modulated carriers in a 50 kHz bandwidth with sub-carrier separation of 4.5 kHz and having the difference between the center frequencies of the outermost subcarriers and the frequencies of the edges of the band-limited channel be approximately 10.75 kHz.

64. Upon information and belief, Mr. Cameron, a named inventor on the ‘891 Patent, had knowledge of the contents of Exhibit A to the FCC Document prior to August 19, 1997.

65. Upon information and belief, Mr. Cameron, a named inventor on the ‘891 Patent, had knowledge of the existence of the FCC Document prior to August 19, 1997.

66. The FCC Document was made public more than one year before the ‘891 Patent’s earliest priority date, and thus qualifies as prior art to the ‘891 Patent under 35 U.S.C. §§ 102(a) and 102(b).

67. Upon information and belief, Mr. Roehr and Mr. Cameron, as co-authors of Petrovic1, Petrovic2, and Petrovic3, had knowledge of the contents and technical details of the multicarrier transmission methods disclosed in each of these papers, and had this knowledge before they filed the ‘718 Application through their attorneys.

68. Upon information and belief, Mr. Cameron, Mr. Roehr, and Mr. Hays, as named co-inventors of the '403 Patent, had knowledge of the contents and technical details described therein, and had this knowledge before they filed the '718 Application through their attorneys.

69. Upon information and belief, Mr. Cameron, as the named "Client Contact" on Exhibit A to the FCC Document, had knowledge of the content and technical details described therein, and had this knowledge before he filed the '718 Application through his attorneys.

70. Upon information and belief, Mr. Cameron had knowledge, prior to the issuance of the '891 Patent, that the FCC Document had been publicly filed with the FCC on or about June 1, 1992.

71. On or about September 18, 1995, Mr. Cameron executed a Declaration and Power of Attorney in connection with the '718 Application that included a signed declaration in which he acknowledged the duty to disclose information that was material to patentability as defined in 37 C.F.R. § 1.56 at all times while the '718 Application was pending. It further included a signed declaration in which Mr. Cameron acknowledged that he had reviewed and understood the contents of the '718 Application's specification, including the claims in the '718 Application.

72. On or about September 11, 1995, Mr. Roehr executed a Declaration and Power of Attorney in connection with the '718 Application that included a signed declaration in which he acknowledged the duty to disclose information that was material to patentability as defined in 37 C.F.R. § 1.56 at all times while the '718 Application was pending. It further included a signed declaration in which Mr. Roehr acknowledged that he had reviewed and understood the contents of the '718 Application's specification, including the claims in the '718 Application.

73. On or about September 20, 1995, Mr. Hays executed a Declaration and Power of Attorney in connection with the '718 Application that included a signed declaration in which he

acknowledged the duty to disclose information that was material to patentability as defined in 37 C.F.R. § 1.56 at all times while the ‘718 Application was pending. It further included a signed declaration in which Mr. Hays acknowledged that he had reviewed and understood the contents of the ‘718 Application’s specification, including the claims in the ‘718 Application.

74. Upon information and belief, Mr. Roehr, Mr. Cameron, and Mr. Hays continued to be aware of the status and content of the claims pending in the ‘718 Application during the prosecution of the ‘718 Application.

75. Upon information and belief, given their participation as authors in each of Petrovic1, Petrovic2, and Petrovic3, both Mr. Roehr and Mr. Cameron knew that each of these papers were material to the claims prosecuted in the ‘718 Application and knew of their individual duties to disclose material prior art to the USPTO for consideration in evaluating the patentability of those claims.

76. Upon information and belief, given their participation as named co-inventors of the ‘403 Patent, Mr. Cameron, Mr. Roehr, and Mr. Hays knew that the ‘403 Patent was material to the claims prosecuted in the ‘718 Application and knew of their individual duties to disclose material prior art to the USPTO for consideration in evaluating the patentability of those claims.

77. Upon information and belief, given Mr. Cameron’s participation in and knowledge of the FCC Document, Mr. Cameron knew that the FCC Document was material to the claims prosecuted in the ‘718 Application and knew of his individual duty to disclose material prior art to the USPTO for consideration in evaluating the patentability of those claims.

78. On August 9, 1995, Applicants, through their attorney, submitted to the USPTO an Information Disclosure Statement (“IDS”) for the ‘718 Application, which did not identify any of the Petrovic1, Petrovic2, Petrovic3, or FCC Document references.

79. On October, 3, 1995, Applicants, through their attorney, submitted to the USPTO an additional IDS for the '718 Application, which did not identify any of the Petrovic1, Petrovic2, Petrovic3, or FCC Document references.

80. Throughout the prosecution of the '718 Application that matured into the '891 Patent, the Applicants never disclosed any of the Petrovic1, Petrovic2, Petrovic3, or FCC Document references to the USPTO.

81. Throughout the prosecution of the '718 Application that matured into the '891 Patent, the Applicants never disclosed the '403 Patent to the USPTO.

82. The Petrovic1, Petrovic2, Petrovic3, and FCC Document references were not considered by the USPTO during prosecution of the '891 Patent.

83. The '403 Patent was not considered by the USPTO during prosecution of the '891 Patent.

84. In the August 9, 1996 Office Action from Examiner Nguyen during prosecution of the '718 Application, the Examiner stated "[a]s to claims 1, 3 and 9, the frequency difference between the center frequency of the outer most carriers and the band edge of the mask is greater than half the frequency difference between the center frequencies of each adjacent carrier, is not taught or suggested in the prior art of record." Claim 9 of the '718 Application was renumbered to claim 5 of the '891 Patent as issued. Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and the FCC Document each disclose this element of independent claims 1, 3, and 5 of the '891 Patent.

85. The teachings of Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and the FCC Document each disclosed multicarrier modulation techniques in band-limited channels where the difference between the center frequencies of the outermost subcarriers and the frequencies of the

edges of the band-limited channel is at least half the difference between the center frequencies of each subcarrier.

86. The teachings of Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and the FCC Document are highly material to the independent claims of the '891 Patent.

87. Petrovic1 undermines the alleged distinctions of independent claims 1, 3, and 5 of the '891 Patent over the prior art of record in the prosecution of the '891 Patent. Petrovic1 disclosed a multicarrier permutation modulation method where the frequency difference between the center frequency of the outermost subcarriers and the frequencies of the edges of the 50 kHz channel is at least 7.5 kHz, and thus more than half the 5 kHz frequency difference between the center frequencies of each subcarrier.

88. Petrovic2 undermines the alleged distinctions of independent claims 1, 3, and 5 of the '891 Patent over the prior art of record in the prosecution of the '891 Patent. Petrovic2 disclosed a multicarrier permutation modulation method where the frequency difference between the center frequencies of the outermost subcarriers and the frequencies of the band edges of the 50 kHz channel is at least 5 kHz, and thus more half the 5 kHz frequency difference between the center frequencies of each subcarrier.

89. Petrovic3 undermines the alleged distinctions of independent claims 1, 3, and 5 of the '891 Patent over the prior art of record in the prosecution of the '891 Patent. Petrovic3 disclosed the elimination of the two outermost potential carriers, which resulted in a frequency difference between the center frequencies of the remaining outermost carriers and the frequencies of the band edges of the channel (at least 3 kHz, the width of the eliminated subcarriers), which is more than half the difference between the center frequencies of each remaining subcarrier (3 kHz).

90. The '403 Patent undermines the alleged distinctions of independent claims 1, 3, and 5 of the '891 Patent over the prior art of record in the prosecution of the '891 Patent. The '403 Patent disclosed a frequency difference between the center frequencies of the outermost carriers and the frequencies of the band edges of the channel of at least 11.5 kHz, which is more than half the difference between the center frequencies of each remaining subcarrier, specifically 1.5 kHz, as disclosed in the '403 Patent.

91. The FCC Document undermines the alleged distinctions of independent claims 1, 3, and 5 of the '891 Patent over the prior art of record in the prosecution of the '891 Patent. The FCC Document disclosed a frequency difference between the center frequencies of the outermost carriers and the frequencies of the band edges of the channel of at least 10.75 kHz, which is more than half the difference between the center frequencies of each remaining subcarrier, specifically 2.25 kHz, as disclosed in the FCC Document.

92. Upon information and belief, a reasonable examiner would have considered Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and/or the FCC Document highly material to the patentability of the '718 Application, because if Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and/or the FCC Document had been disclosed to the Examiner, the Examiner would have had information that was highly material to certain arguments and limitations advocated as distinctions over the prior art of record (which did not include Petrovic1, Petrovic2, Petrovic3, the '403 Patent, or the FCC Document).

93. Upon information and belief, the Examiner would not have allowed independent claims 1, 3, and 5 to issue if he was aware of Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and/or the FCC Document. Therefore, Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and/or the FCC Document are but-for material prior art.

94. Upon information and belief, Mr. Roehr and Mr. Cameron knew, prior to the issuance of the '891 Patent, that Petrovic1, Petrovic2, and Petrovic3 disclosed a difference in the center frequencies of the outermost subcarriers from the frequencies of the band-edges of the channel of at least half the difference between the center frequencies of each of the subcarriers, as claimed in the '718 Application.

95. Upon information and belief, Mr. Cameron, Mr. Roehr, and Mr. Hays knew, prior to the issuance of the '891 Patent, that the '403 Patent disclosed a difference in the center frequencies of the outermost subcarriers from the frequencies of the band-edges of the channel of at least half the difference between the center frequencies of each of the subcarriers, as claimed in the '718 Application.

96. Upon information and belief, Mr. Cameron knew, prior to the issuance of the '891 Patent, that the FCC Document disclosed a difference in the center frequencies of the outermost subcarriers from the frequencies of the band-edges of the channel of at least half the difference between the center frequencies of each of the subcarriers, as claimed in the '718 Application.

97. Upon information and belief, Mr. Roehr and Mr. Cameron knowingly, and with deceptive intent, failed to disclose Petrovic1, Petrovic2, and/or Petrovic3 to the USPTO, because they knew that this highly material prior art might interfere with, or prevent, the issuance of a patent that contained the claims of the '718 Application. Upon information and belief, this failure to disclose material prior art was the product of a deliberate act, one that was taken for the purposes to obtain a patent or claim scope to which they were not entitled, and for the purposes to obtain the competitive advantage an ill-gotten patent may provide.

98. Upon information and belief, Mr. Cameron, Mr. Roehr, and Mr. Hays knowingly, and with deceptive intent, failed to disclose the '403 Patent to the USPTO, because they knew

that this highly material prior art might interfere with, or prevent, the issuance of a patent that contained the claims of the '718 Application. Upon information and belief, this failure to disclose material prior art was the product of a deliberate act, one that was taken for the purposes to obtain a patent or claim scope to which they were not entitled, and for the purposes to obtain the competitive advantage an ill-gotten patent may provide.

99. Upon information and belief, Mr. Cameron knowingly, and with deceptive intent, failed to disclose the FCC Document to the USPTO, because he knew that this highly material prior art might interfere with, or prevent, the issuance of a patent that contained the claims of the '718 Application. Upon information and belief, this failure to disclose material prior art was the product of a deliberate act, one that was taken for the purposes to obtain a patent or claim scope to which they were not entitled, and for the purposes to obtain the competitive advantage an ill-gotten patent may provide.

100. The '891 Patent was obtained through inequitable conduct, and is therefore unenforceable because Mr. Cameron, Mr. Roehr, and Mr. Hays were involved in the prosecution of the '718 Application and failed to disclose material prior art to the USPTO with the intent to deceive the USPTO to issue the '891 Patent.

101. The foregoing allegations regarding the commission of inequitable conduct regarding the prosecution of the '718 Application are summarized in the following allegations:

102. **WHO**: As alleged above, but for Mr. Roehr's and Mr. Cameron's decision to deliberately and intentionally withhold Petrovic1, Petrovic2, and/or Petrovic3 during the prosecution of the '718 Application, independent claims 1, 3, and 5 of the '891 Patent would never have issued. As alleged above, but for Mr. Cameron's, Mr. Roehr's, and Mr. Hays's decision to deliberately and intentionally withhold the '403 Patent during the prosecution of the

‘718 Application, independent claims 1, 3, and 5 of the ‘891 Patent would never have issued. As alleged above, but for Mr. Cameron’s decision to deliberately and intentionally withhold the FCC Document during the prosecution of the ‘718 Application, independent claims 1, 3, and 5 of the ‘891 Patent would never have issued.

103. **WHAT**: As alleged above, Mr. Roehr and Mr. Cameron, withheld Petrovic1, Petrovic2, and Petrovic3, each of which disclosed the use of multicarrier modulation techniques with a separation between center frequencies of the outermost subcarriers and the band-edge frequencies of the channel of at least the frequency difference between each of the subcarriers. As alleged above, Mr. Cameron, Mr. Roehr, and Mr. Hays withheld the ‘403 Patent, which disclosed the use of multicarrier modulation techniques with a separation between center frequencies of the outermost subcarriers and the band-edge frequencies of the channel of at least the frequency difference between each of the subcarriers. As alleged above, Mr. Cameron withheld the FCC Document, which disclosed the use of multicarrier modulation techniques with a separation between center frequencies of the outermost subcarriers and the band-edge frequencies of the channel of at least the frequency difference between each of the subcarriers. This was the element that the Examiner of the ‘891 Patent said was not taught or suggested by the prior art of record. Any one of Petrovic1, Petrovic2, Petrovic3, the ‘403 Patent, or the FCC Document anticipate independent claims 1, 3, and 5 of the ‘891 Patent.

104. **WHERE**: Section II of Petrovic1, “Proposed Modulation Technique,” describes in detail the frequency difference between subcarriers and a frequency difference between the outermost subcarriers and the band-edge frequencies of the channel of at least half the frequency difference between each of the subcarriers. Section 2 of Petrovic2, “Description of the Proposed MPM,” describes in detail the frequency difference between subcarriers and a frequency

difference between the outermost subcarriers and the band-edge frequencies of the channel of at least half the frequency difference between each of the subcarriers. Section III of Petrovic3, “Description of the Proposed MCM Technique,” describes in detail the frequency difference between subcarriers and a frequency difference between the outermost subcarriers and the band-edge frequencies of the channel of at least half the frequency difference between each of the subcarriers. Column 13, lines 15-33 of the ‘403 Patent, as well as Figure 9 of the ‘403 Patent, describes in detail the frequency difference between subcarriers and a frequency difference between the outermost subcarriers and the band-edge frequencies of the channel of at least half the frequency difference between each of the subcarriers. Exhibit A to the FCC Document describes in detail the frequency difference between subcarriers and a frequency difference between the outermost subcarriers and the band-edge frequencies of the channel of at least half the frequency difference between each of the subcarriers. Each of Petrovic1, Petrovic2, Petrovic3, and the FCC Document were published well before the June 7, 1995 filing date of the ‘718 Application that matured into the ‘891 Patent. The ‘403 Patent was filed well before the June 7, 1995 filing date of the ‘718 Application that matured into the ‘891 Patent.

105. **WHY:** As alleged, the descriptions of the multicarrier modulation techniques in Petrovic1, Petrovic2, Petrovic3, the ‘403 Patent, and the FCC Document supply the claim limitation the Examiner stated in the Office Action dated June 7, 1996 as missing from the prior art of record in the prosecution of the ‘891 Patent. In particular, Petrovic1 discloses a 7.5 kHz guard band between the outer most subcarriers and the edge of the channel, more than half the 5 kHz separation between subcarriers. Petrovic2 discloses a 5 kHz guard band between the outer most subcarriers and the edge of the channel, more than half of the 5 kHz separation between subcarriers. Petrovic3 discloses the elimination of the two outer most subcarriers with a spacing

of 3 kHz, which results in a frequency difference between the outer most subcarriers and the edge of the channel of at least one and one-half (1.5) times the frequency difference of each subcarrier. The '403 Patent discloses a 11.5 kHz guard band between the outer most subcarriers and the edge of the channel, more than half of the 3 kHz separation between subcarriers. The FCC Document discloses a frequency difference between the outer most subcarriers and the edge of the channel of 10.75 kHz and a sub-carrier separation of 4.5 kHz. Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and the FCC Document therefore anticipate at least independent claims 1, 3, and 5 of the '891 Patent and were not in the prior art of record.

106. **HOW:** But for the deliberate withholding of Petrovic1, Petrovic2, Petrovic3, the '403 Patent, and/or the FCC Document, Examiner Nguyen would have rejected at least independent claims 1, 3, and 5 of the '891 Patent under 35 U.S.C. § 102 as anticipated by Petrovic1, Petrovic2, Petrovic3, the '403 Patent, or the FCC Document. Petrovic1, Petrovic2, and/or Petrovic3 were not inadvertently omitted by Mr. Roehr and Mr. Cameron, but rather deliberately withheld to ensure that Examiner Nguyen issued the '891 Patent. The '403 Patent was not inadvertently omitted by Mr. Cameron, Mr. Roehr, and Mr. Hays, but rather deliberately withheld to ensure that Examiner Nguyen issued the '891 Patent. The FCC Document was not inadvertently omitted by Mr. Cameron, but rather deliberately withheld to ensure that Examiner Nguyen issued the '891 Patent.

Failure to Join Inventor as Co-Inventor With Intent to Deceive

107. The '891 Patent was obtained through inequitable conduct for failure to join Dr. Rade Petrovic as a co-inventor and therefore is unenforceable, as set forth in detail below.

108. Upon information and belief, Dr. Petrovic substantially contributed to the technology described in Petrovic1.

109. Upon information and belief, Dr. Petrovic substantially contributed to the technology described in Petrovic2.

110. Upon information and belief, Dr. Petrovic substantially contributed to the technology described in Petrovic3.

111. Upon information and belief, Dr. Petrovic collaborated with Mr. Roehr and Mr. Cameron to develop the multicarrier modulation techniques claimed in the '718 Application from at least between the time of the development of the presentation of Petrovic1 through the final revision of Petrovic3.

112. Upon information and belief, Dr. Petrovic conceived of at least one limitation of one or more of the claims in the '891 Patent and that conception was conveyed to one or more of the Applicants from at least the time between of the development of the presentation of Petrovic1 through the final revision of Petrovic3.

113. Notwithstanding his contribution to the conception of at least one claim of the '891 Patent, Dr. Petrovic was not named as a co-inventor. Upon information and belief, Dr. Petrovic was unaware of the prosecution of the '891 Patent and had no deceptive intent in not being named as an inventor.

114. Upon information and belief, Mr. Roehr and Mr. Cameron knew that Dr. Petrovic substantially contributed to at least one limitation of the claims of the '718 Application.

115. On or about September 18, 1995, Mr. Cameron executed a Declaration and Power of Attorney in connection with the '718 Application that included a signed declaration in which he declared that he was the original, first and joint inventor of the subject matter claimed in the '718 Application and for which a patent was sought.

116. On or about September 11, 1995, Mr. Roehr executed a Declaration and Power of Attorney in connection with the '718 Application that included a signed declaration in which he declared that he was the original, first and joint inventor of the subject matter claimed in the '718 Application and for which a patent was sought.

117. Upon information and belief, Mr. Roehr and Mr. Cameron knew that Dr. Petrovic's contributions to one or more claims of the '718 Application were material to the prosecution of the '718 Application and knew of their individual duties to disclose such material information regarding Dr. Petrovic's contribution to one or more claims of the '718 Application to the USPTO.

118. Upon information and belief, a reasonable examiner would have considered the omission of Dr. Petrovic material to the patentability of the '718 Application, because if Mr. Roehr and Mr. Cameron had informed the USPTO that Dr. Petrovic had contributed to the conception of to one or more claims of the '718 Application, the patent would not have issued pursuant to 35 U.S.C. § 116.

119. Upon information and belief, Mr. Roehr and Mr. Cameron knowingly, and with deceptive intent, failed to join Dr. Petrovic as a co-inventor on the '718 Application.

120. The foregoing allegations regarding the commission of inequitable conduct regarding the prosecution of the '718 Application are summarized in the following allegations:

121. **WHO**: As alleged above, Mr. Roehr and Mr. Cameron intentionally and deliberately failed to join Dr. Petrovic as a co-inventor on the '718 Application. But for this conduct, the claims of the '891 Patent would not have issued.

122. **WHAT**: Dr. Petrovic contributed to the conception of one or more claims of the ‘891 Patent during the earlier collaborations between Dr. Petrovic, Mr. Roehr, and Mr. Cameron that led to the publication of Petrovic1, Petrovic2, and/or Petrovic3.

123. **WHERE**: Petrovic1, Petrovic2, and Petrovic3 all list Dr. Petrovic as the first co-author.

124. **WHY**: As alleged, all of the limitations of independent claims 1, 3, and 5 of the ‘891 Patent are disclosed in Petrovic1, Petrovic2, and Petrovic3. The claims are based on the contributions of Dr. Petrovic, but Applicants filed the ‘718 Application without Dr. Petrovic joined as a co-inventor with full knowledge of Dr. Petrovic’s contribution.

125. **HOW**: But for the deliberate withholding by the Applicants to include Dr. Petrovic as a co-inventor, the USPTO would never have issued the ‘891 Patent. Had Mr. Roehr or Mr. Cameron disclosed Dr. Petrovic’s contributions to the USPTO, the claims of the ‘891 Patent would have been rejected under at least 35 U.S.C. § 116 for failure of Mr. Roehr and Mr. Cameron to join Dr. Petrovic as a co-inventor in the ‘718 Application.

126. The ‘891 Patent was obtained through inequitable conduct, and is therefore unenforceable, because Dr. Petrovic was omitted as a co-inventor from the ‘718 Application with the intent to deceive the USPTO to issue the ‘891 Patent.

127. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged enforceability of the ‘891 Patent.

128. The Counter-Plaintiffs are entitled to declaratory judgment that the ‘891 patent is unenforceable.

SIXTH COUNTERCLAIM

(Declaratory Judgment of Non-Infringement of U.S. Patent No. 5,915,210)

129. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

130. By its Complaint, MTel asserts that Counter-Plaintiffs have infringed the '210 Patent.

131. Counter-Plaintiffs have denied MTel's claim of infringement of the '210 Patent, and contend that they do not infringe the '210 Patent or any other valid and enforceable asserted claim thereof.

132. The accused products and services do not directly or indirectly infringe because Counter-Plaintiffs do not practice every element of at least one valid and enforceable claim of the '210 Patent.

133. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged infringement of the '210 Patent.

134. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Counter-Plaintiffs are entitled to a declaratory judgment from this Court finding that the '210 Patent is not infringed, directly or indirectly, by Counter-Plaintiffs.

SEVENTH COUNTERCLAIM

(Declaratory Judgment of Invalidity of U.S. Patent No. 5,915,210)

135. Counter-Plaintiffs incorporate and re-allege Paragraphs 1-41 and Paragraphs A-H of their Answer, each of their Affirmative Defenses, and Paragraphs 1-6 of their Counterclaims.

136. By its Complaint, MTel asserts that Counter-Plaintiffs have infringed the '210 Patent. Counter-Plaintiffs have denied this allegation and contend that the '210 patent is invalid under 35 U.S.C. §§ 101, 102, 103, 112, and/or 251.

137. An actual and justiciable controversy has thus arisen between Counter-Plaintiffs and MTel concerning the alleged validity of the '210 Patent.

138. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201, *et seq.*, Counter-Plaintiffs are entitled to a declaratory judgment from this Court finding that the '210 Patent is invalid pursuant to 35 U.S.C. §§ 101, 102, 103, 112, and/or 251.

PRAYER FOR RELIEF

WHEREFORE Counter-Plaintiffs respectfully request that the Court enter judgment against MTel and grant Counter-Plaintiffs the following relief:

1. Dismiss the Complaint in its entirety with prejudice, deny all relief requested by MTel, and find that MTel takes nothing by its claims against Counter-Plaintiffs;
2. Enter judgment in favor of Counter-Plaintiffs, and against MTel on the Complaint;
3. Declare that Counter-Plaintiffs have not infringed, induced the infringement, or contributed to the infringement of any valid and enforceable claim of any of the Patents-in-Suit;
4. Declare that one or more claims of each of the Patents-in-Suit are invalid;
5. Declare that the '891 Patent is unenforceable;
6. Enjoin MTel, its assigns, and all those in privity therewith from asserting any of the Patents-in-Suit against Counter-Plaintiffs or any of their customers or suppliers;
7. Enter judgment against MTel for the amount of damages that Counter-Plaintiffs prove at trial;
8. Declare and enter judgment that this is an exceptional case entitling Counter-Plaintiffs to an award of their attorneys' fees, together with interest, and the costs and expenses of the action under 35 U.S.C. § 285;

9. Enter a judgment awarding Counter-Plaintiffs their expenses, costs, and attorneys' fees in accordance with Rule 54(d) of the Federal Rules of Civil Procedure; and

10. Grant Counter-Plaintiffs such other and further relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), Counter-Plaintiffs demand a jury trial on all issues so triable.

Dated: October 16, 2014

Respectfully submitted,

/s/ Jose L. Patiño

Jose L. Patiño (CA Bar No. 149568)

JPatino@foley.com

Nicola A. Pisano (CA Bar No. 151282)

npisano@foley.com

Justin E. Gray (CA Bar No. 282452)

jegray@foley.com

Steven M. Millendorf (CA Bar No. 292704)

smillendorf@foley.com

Foley & Lardner LLP

3579 Valley Centre Drive, Suite 300

San Diego, CA 92130-3302

Telephone: 858.847.6700

Facsimile: 858.792.6773

Attorneys for Defendants and Counter-Plaintiffs

Leap Wireless International, Inc. and Cricket Communications, Inc.

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on this, the 16th day of October 2014. Any other counsel of record will be served by first class U.S. mail on this same date.

/s/ Jose L. Patiño

Jose L. Patiño